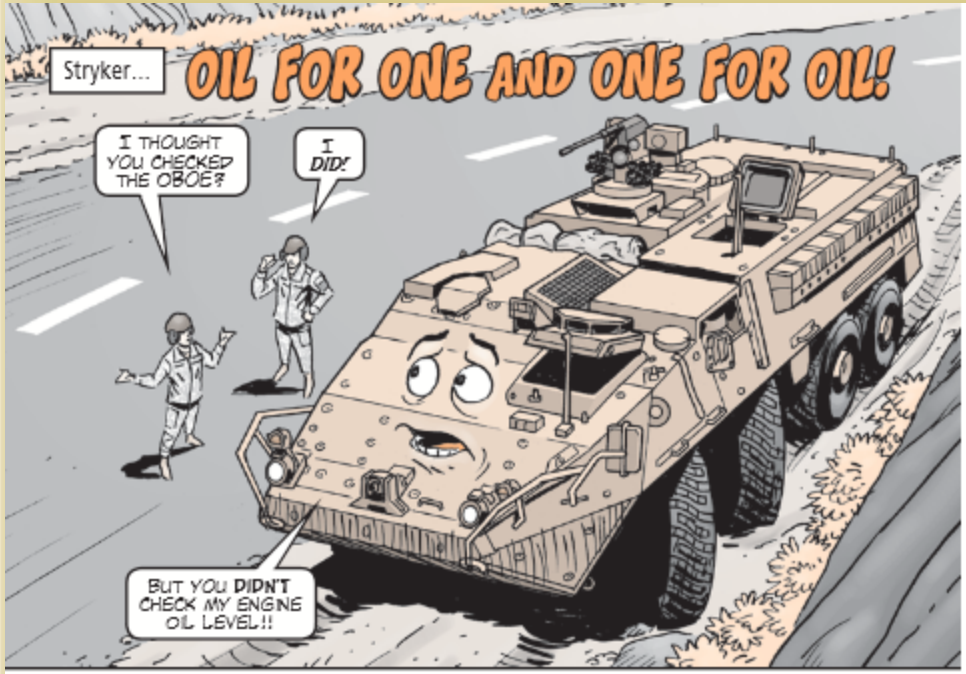


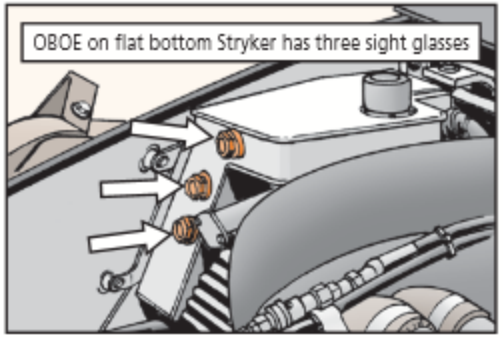
Crewmen, if you think keeping your Stryker's on board oil exchanger (OBOE) filled means you don't have to check the engine oil—you better think again!

The OBOE works like this: For every 10 hours of operation, the OBOE takes approximately 1 quart of oil from the engine and injects it into the fuel system where it's burned off.

Then the OBOE replaces that engine oil from its 1.71-gal reservoir. When it's full, the OBOE can continue to replace the burned-off engine oil for about 60 hours before it runs dry.

When it's empty, the OBOE will continue to draw oil from the engine for burnoff. And if there's not enough oil for the engine, the engine burns up!

To keep that from happening, check the three sight glasses on the side of the flat bottom Stryker's OBOE. There's one at the top, one in the middle and one near the bottom. You're good to go if you can see oil in the top sight glass. But if you can't see oil in the bottom sight glass, your OBOE is WAY overdue for a fill-up.

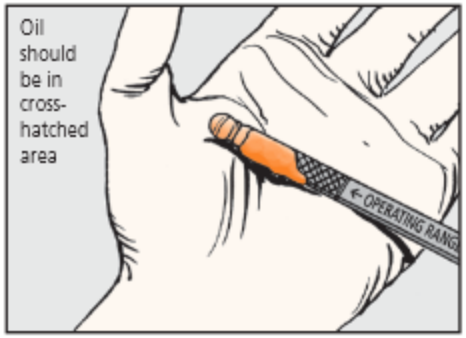


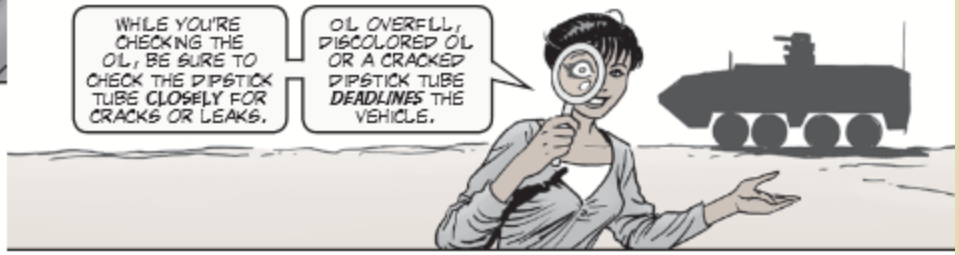
On the double V-hull (DVH) Stryker, the OBOE is located toward the front of the engine compartment and has a single sight glass. If the oil level is at the FULL mark, you are good. But if the oil level falls below the ADD mark, service the OBOE right away.

Some crewmen wrongly assume that just because they keep the OBOE filled, they don't have to check the engine oil. The **only** way to know if you have an oil leak or oil contamination is to check the engine oil.

Before checking your Stryker's engine oil, make sure the vehicle is on level ground. And wait at least 20 minutes after shutting the engine down before pulling the dipstick.

The oil level should be in the crosshatched area of the dipstick. Look for whitish blobs that indicate water contamination. And take a sniff—if you smell fuel, the oil could be contaminated.



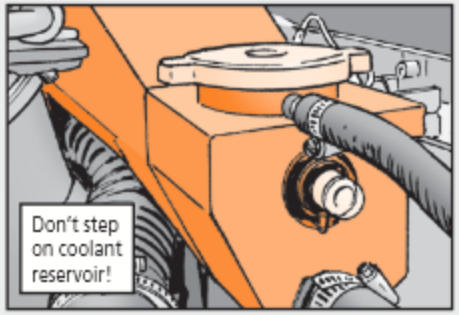


Stryker...

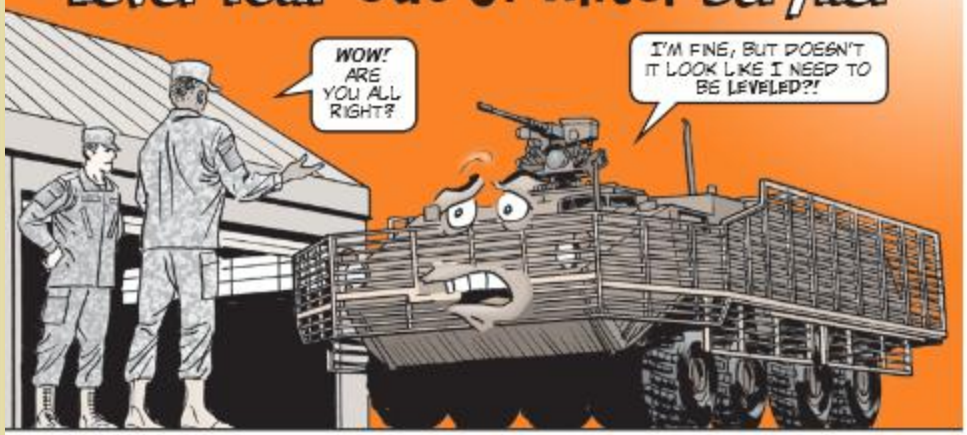
WATCH YOUR STEP AROUND THE RESERVOIR

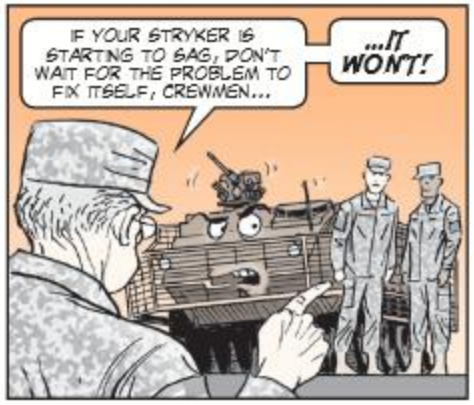
Crewmen, it's easy to put your feet in the wrong place when you're pulling the air filter on your Stryker for cleaning. But one wrong step and a big problem can follow.

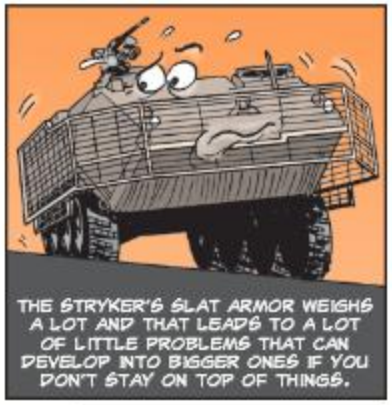
The coolant reservoir can't support your weight. If you step on it, you may not see any apparent damage. But the inner seal can crack, sending all the coolant to the overflow tank and causing an overheated engine.



Level Your Out of Kilter Stryker



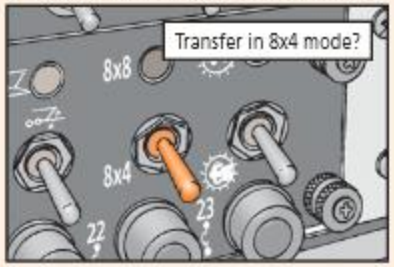




THE HEIGHT MANAGEMENT SYSTEM (HMS) CAN BE KNOCKED OUT OF KLTER BY THE EXTRA WEIGHT.

YOU'LL KNOW IT'S TIME TO LEVEL YOUR STRYKER WHEN YOU SEE IT SAGGING AT ONE OR MORE OF ITS CORNERS.

1. Start the vehicle.
2. Make sure the transfer is in 8X4 mode.



3. Drive the vehicle over a smooth, level stretch of road. The Stryker must be moving at a steady speed and in a straight line. If not, the system unavailable light will flash.

4. While driving, press the center level button on the HMS panel one time. The front and rear middle LEDs will start flashing. The flashing will continue during the leveling process, which could take up to four minutes. Once the vehicle is level, the flashing will stop and the two LEDs will stay on.

5. If your Stryker does not level on the first attempt, try it again. If it fails a second time, or if the system fault or low nitrogen lights come on, notify field maintenance.

Stryker...

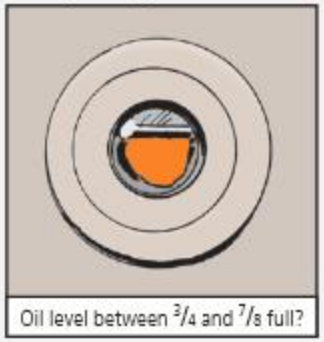
Go Slow When Checking Hub

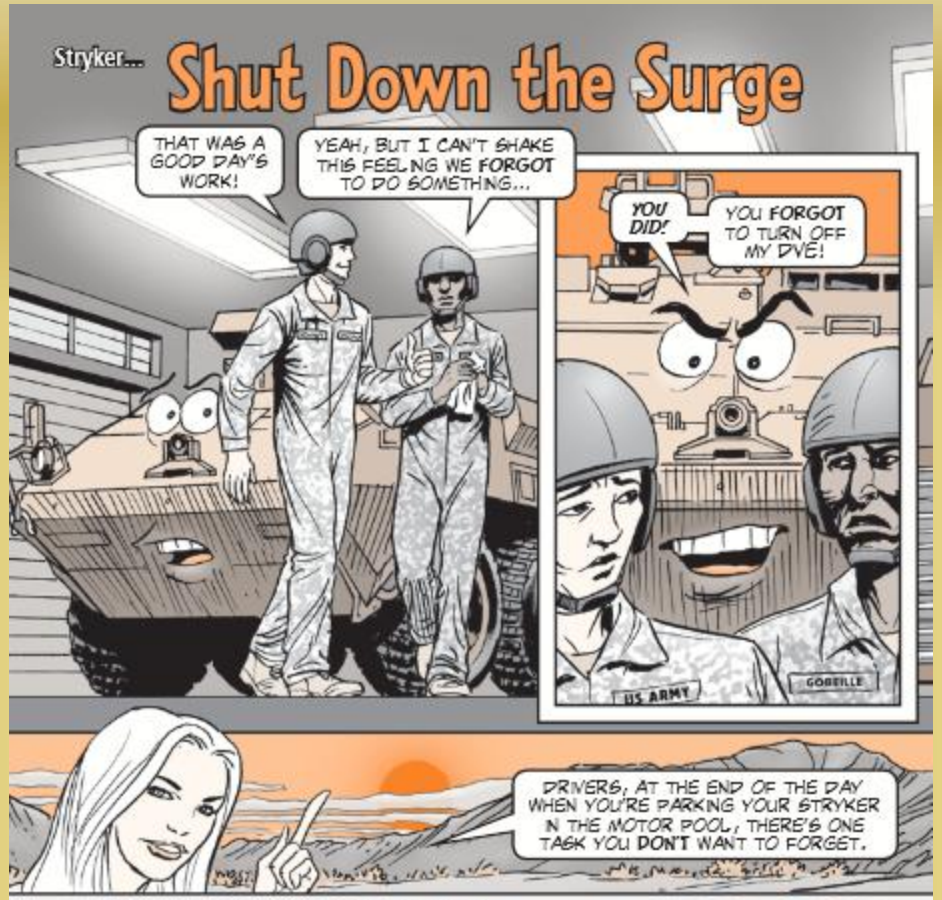
Crewmen, don't be in a big hurry to check the oil level on your Stryker's wheel hubs.

While the sight glass on each of your Stryker's hubs makes it a snap to check the oil level, checking too soon after operation can lead you to believe the level is low. And if you add too much oil, blown seals and a lot of messy work to fix them can be the result.

So wait about an hour after operation before checking the oil levels. That gives the oil time to run back from the planetary gears into the hub so you can get an accurate reading in the sight glass.

The correct oil level should be between $^{3}/_{4}$ and $^{7}/_{8}$ full in the sight glass.

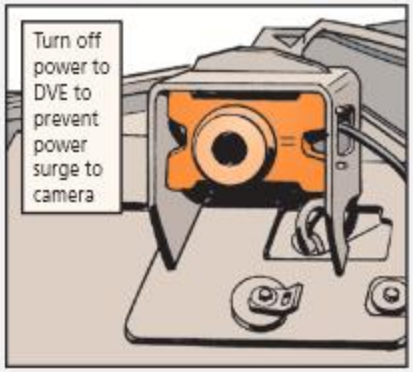




Be sure to shut off power to the driver's vision enhancer (DVE) before you shut down the engine and power off the vehicle. You'll also want to double-check that the DVE is shut down before applying power to the vehicle and starting the engine.

If you forget, a power surge at startup could damage the DVE camera, NSN 5855-01-525-1631, or the DVE screen, NSN 5980-01-525-1688.

A new camera costs about $10,300 and a new screen about $3,500.



Tactical Vehicles...

NO PAINT ON RUBBER LINES AND HOSES!

OH, THANK YOU **SO MUCH** FOR COVERING UP MY RUBBER HOSES!!

WE'VE BEEN THROUGH **A LOT** TOGETHER.

I DON'T WANT IT TO END DUE TO ***CRACKING!***

THE RUBBER ON YOUR VEHICLES SHOULD **NOT** BE PAINTED.

SO BEFORE YOUR VEHICLE IS SENT OFF FOR A FRESH COAT OF CARC PAINT, TAKE A **CLOSE LOOK** AT THE EXTERIOR RUBBER LINES AND HOSES.

HAVE THEY BEEN COVERED WITH TAPE AND PAPER YET?

AHH... MY SUPPORT CAN DO IT BEFORE THEY PAINT.

SURE THEY **CAN.** BUT SINCE IT'S **YOUR** VEHICLE AND ***YOU*** HAVE TO DRIVE IT, PROTECTING THOSE LINES AND HOSES YOURSELF IS JUST **GOOD OLD COMMON SENSE.**

CARC PAINT AND RUBBER **DO NOT MIX!**

CARC IS DESIGNED FOR USE ON HARD METAL SURFACES, **NOT** FLEXIBLE RUBBER SURFACES LIKE BRAKE LINES AND HYDRAULIC HOSES.

THE SOLVENTS IN CARC CAN **DAMAGE** THE RUBBER'S FLEXIBILITY AND MAYBE EVEN CAUSE PREMATURE CRACKING.

I WOULD'VE LASTED **LONGER** IF SOMEONE HAD TAKEN BETTER CARE OF ME!

IF THAT HAPPENS, YOUR VEHICLE'S ***UNSAFE*** UNTIL THE HOSES ARE **REPLACED.**

AW, C'MON! **REALLY?** ALL BECAUSE YOU ***DIDN'T COVER*** MY RUBBER PARTS?

TAKE ***ANOTHER*** LOOK AT YOUR VEHICLE AFTER IT'S RETURNED TO MAKE SURE THE RUBBER PARTS **AREN'T** PAINTED!

IF YOU GET A VEHICLE WITH PAINT ON THE EXTERIOR RUBBER, ***DON'T*** ASSUME YOU'VE GOT A BAD PART.

SCRATCH OFF THE PAINT AND CHECK TO SEE IF THE PART IS STILL SERVICEABLE.

What looks like rotting rubber could really be paint cracking

IF YOU FIND A CARC-PAINTED RUBBER HOSE THAT HAS DEVELOPED CRACKS, **REPLACE** THE HOSE AND SUBMIT A QDR ALONG WITH THE FAILED PART.

QUESTIONS? TARDEC-TACOM MATERIALS ENGINEERING CAN ***HELP.***

JUST CONTACT DAN NYMBERG AT 586-282-7445, DSN 786-7445, OR daniel.d.nymberg.civ@mail.mil

The effects of neglected PMCS go beyond inconvenience. When a vehicle is NMC, a weapon improperly assembled or a radio's batteries are dead, Soldiers and missions are put at risk.

Units should never take detailed checks lightly. Schedule sufficient time for PMCS, pre-combat checks (PCCs) and pre-combat inspections (PCIs) before **each** mission.

All equipment operators need to be familiar with TMs and checklists, but only qualified inspectors should perform technical inspections prior to repair, evacuation or turn-in of unserviceable equipment.

Inspections Win the Day

Safety inspections are one of the most important accident prevention tools in a unit's safety program. Trained inspectors can spot faults or malfunctions before an accident occurs.

All inspectors should know the standards, be trained on the equipment they inspect and be able to reference the proper TMs.

Individual involvement, leadership engagement and supervision at all levels help reinforce an effective safety program.

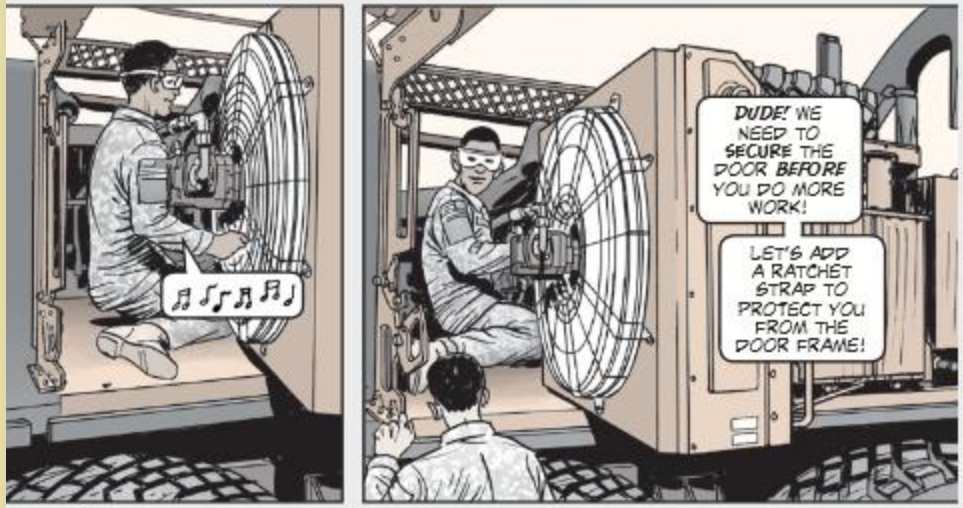
For detailed equipment inspection checklists, visit the US Army Combat Readiness/Safety Center's Driver's Training Toolbox at:

https://safety.army.mil/drivertrainingtoolbox

- PMCS done on all equipment
- DA Form 5988-E completed and logged
- Vehicle(s) dispatched
- -10 TMs present
- Basic issue items (BII) complete and present
- Drivers properly licensed
- Equipment loaded by load plan
- Vehicle load plan verified
- First aid kit complete and present
- Night-vision devices clean and operational
- Fire Suppression System (FSS) working
- Handheld fire extinguishers working
- Cargo secured and tied down
- Prime movers and trailer brake systems properly connected and operational
- Risk assessment done
- Risk assessment form signed by the approving authority.

M1074A1/
M1075A1 PLS...

Fix for Latch Hazard

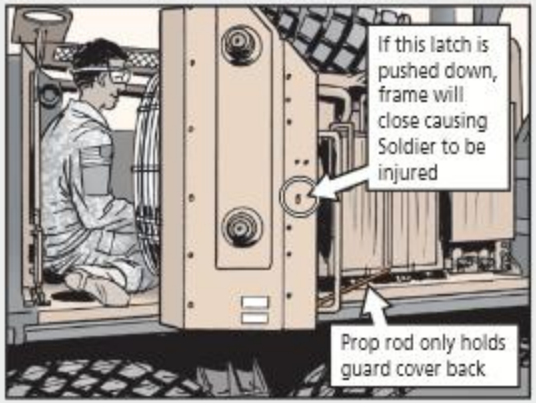


There's danger related to your unit's M1074A1 and M1075A1 PLS charge air cooler and radiator assembly doors. While working inside the engine compartment or in the path of the door frame, you could be struck or crushed against the engine or vehicle fender!

HERE'S WHAT CREATES THE PROBLEM!

The charge air cooler and radiator assembly doors are two-piece assemblies; they have a guard and a frame assembly. The outer guard on each door can be held open with a prop rod while maintenance is done inside the engine compartment.

The outer door guards also have a latch that allows the two pieces to be separated from the radiator and charge air cooler frame assemblies. If the latch is pulled while the prop rod is in use, the frame separates from the guard. The frame will move and can strike or crush anyone working inside the engine compartment or in the path of the frame.

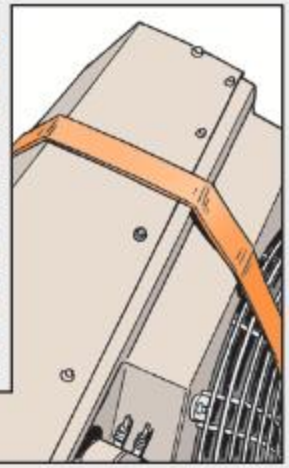


HERE'S WHAT SOLVES THE PROBLEM!

10-ft ratchet strap, NSN 5340-01-341-2984

1. Open the charge air cooler and radiator doors.
2. Get the 10-ft ratchet strap, NSN 5340-01-341-2984, from the BII storage box.

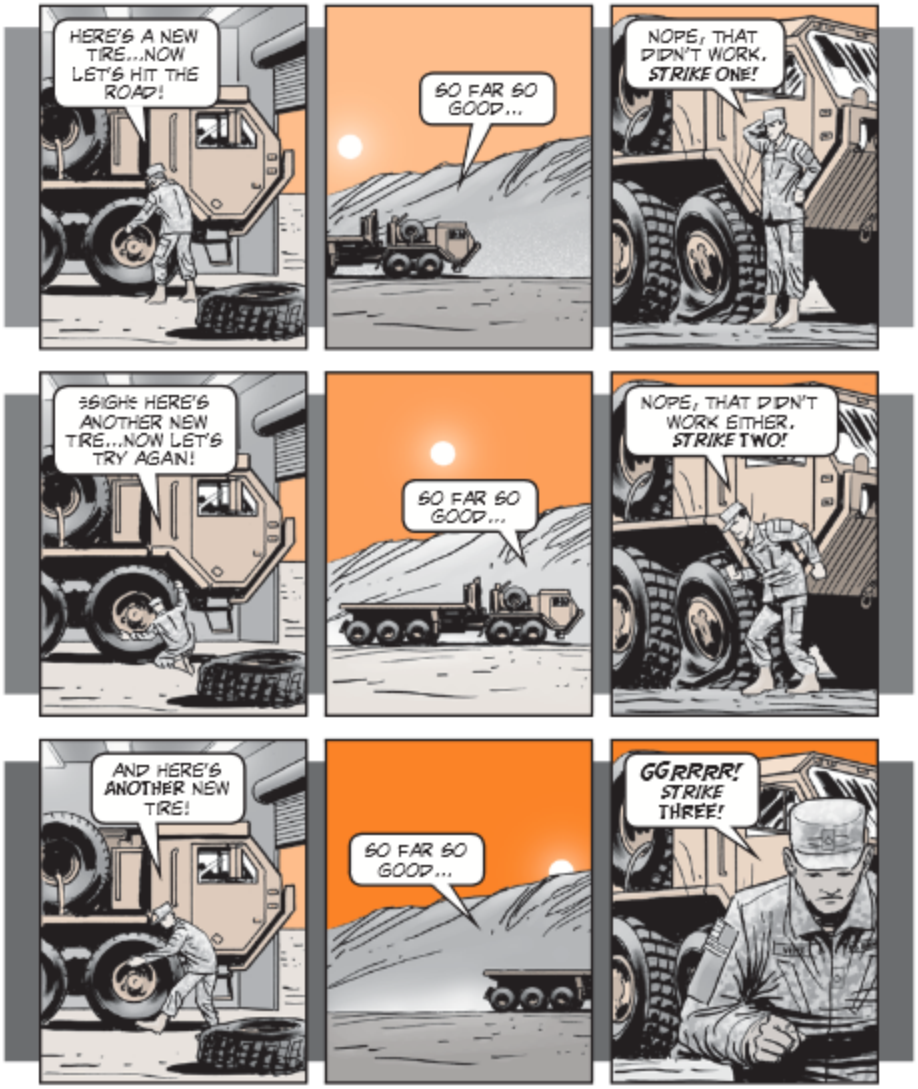
3. Attach the non-ratcheting hook end to the top of the grab handle of the guard.



4. Route the strap over the top of the guard and frame, between the second and third frame bolts.

5. Attach the ratcheting hook end to the bottom of the guard grab handle and tighten it to secure the assembly together.

Spindle Is Key to Tire Leak Mystery!



Dear Editor,

A problem with an M1075A1 PLS was recently brought to my attention. The truck had low miles, but it kept dumping air out of the tire on the front passenger side of the vehicle.

At first, we thought it was a tire leak because only the front passenger tire deflated to 25 psi after shutting down the vehicle. We followed the troubleshooting guidance in the TM and still couldn't find the solution.

After swapping out the pneumatic control unit, quick-release valve, wheel valve, wet tank transducer, pneumatic brake valve, and the CTIS controller, the problem didn't go away. We even swapped out wheel seals, hubs and tires, but the front passenger tire still deflated to 25 psi.

Finally, the truck's front axle was taken apart down to the spindle. We found that one of the three holes drilled on the back side of the spindle for the central tire inflation system (CTIS) had a check ball that was depressed into its machined hole. The spindle was compared to a known good one, and its check balls were ***not*** depressed into the machined holes.

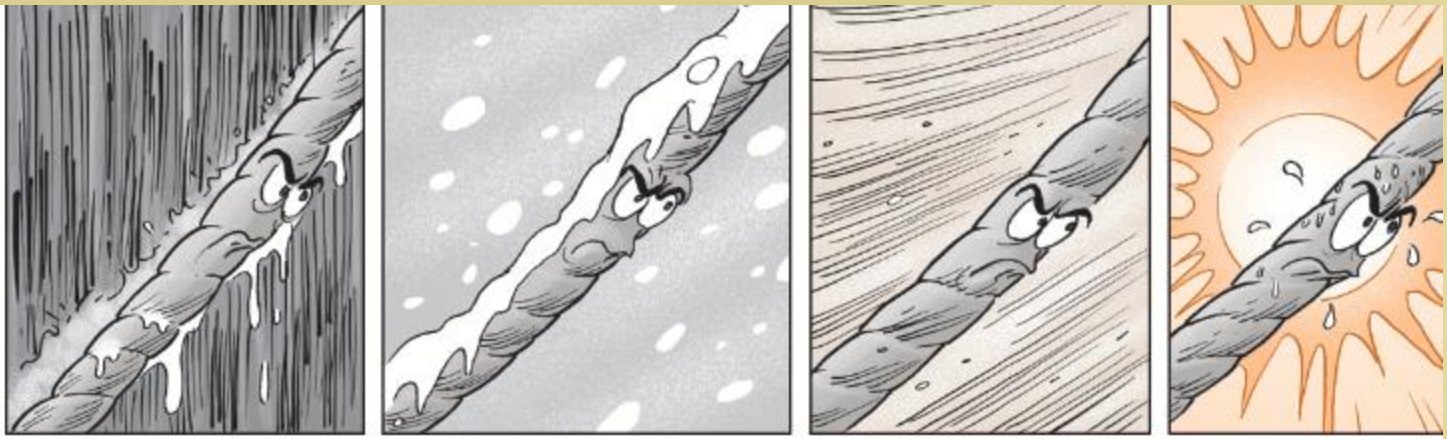
We replaced the spindle on the truck and the problem was corrected.

This has happened with a few other trucks Army-wide, so your readers can save a lot of trouble by checking the spindle if they ever get a slow leak that won't go away with normal troubleshooting.

David M. Watts
TACOM Automotive LAR
2/25 SBCT BLST
Schofield Barracks, HI

Editor's note: *Thanks, Mr. Watts. Your letter may keep others from spinning their wheels over a faulty spindle! By the way, TACOM tells us that this problem may affect M1074A1 trucks, also.*

DON'T LEAVE WIRE ROPE STRANDED!



EXPOSED TO RAIN, SNOW, WIND AND HEAT... IT'S A **HARD LIFE** FOR US WIRE ROPES WHO ARE USED ON CRANES, WINCHES AND CONSTRUCTION EQUIPMENT.

THESE CONDITIONS **WEAKEN** US UNTIL WE'RE NO LONGER USEABLE OR SAFE!

PM WILL KEEP YOUR WIRE ROPE HEALTHY, BUT FIRST YOU'LL NEED TO PUT ON SOME **LEATHER GLOVES** TO PROTECT YOUR HANDS FROM BROKEN STRANDS.

HERE'S WHAT TO DO AFTER A **MUDDY** OR **DIRTY** OPERATION...

Cleaning

PLAY OUT THE WIRE ROPE AND STRETCH IT OUT STRAIGHT ON A CLEAN SURFACE, LIKE A PAVED MOTOR POOL.

USE A **WIRE BRUSH**, LIKE THE ONE FROM THE STANDARD AUTOMOTIVE TOOL SET (SATS), TO REMOVE OLD LUBE, DIRT AND CORROSION.

CLEAN THE **ENTIRE CABLE**. GRIT AND CORROSION GET BURIED AMONG THE CABLE STRANDS.

Inspecting

WHILE YOU'RE CLEANING, LOOK FOR KINKS, BENDS, CAGING AND OTHER DAMAGE. BROKEN WIRES CAN KO THE CABLE, TOO.

SEE YOUR VEHICLE'S TM FOR INSPECTION DETAILS. FM 5-125, *RIGGING TECHNIQUES, PROCEDURES AND APPLICATIONS*, AND TB 43-0142, *SAFETY INSPECTION AND TESTING OF LIFTING DEVICES*, HAVE MORE GOOD INFO. **REPLACE** THE CABLE IF NECESSARY.

Kinks

Bird-caging

A DAMAGED CABLE SHOULD BE ***DESTROYED*** TO KEEP IT FROM BEING REUSED. GET YOUR WELDER TO CUT THE CABLE INTO SMALL SECTIONS.

Lubing

LUBE THE WIRE ROPE ACCORDING TO THE LUBRICATION INSTRUCTIONS FOR YOUR EQUIPMENT.

THERE ARE SOME **OTHER** THINGS YOU CAN DO TO KEEP THE ROPE ***MISSION-READY.***

IF THE CABLE GETS **LOTS OF USE**, GIVE IT A COAT OF OE-HDO 30 ENGINE OIL. STAY AWAY FROM ***USED*** OIL. IT CONTAINS ACID THAT CAN WEAKEN THE ROPE STRANDS.

THE CABLE ***DOESN'T*** NEED OIL IN DRY, DUSTY AREAS, THOUGH. IN FACT, OIL JUST COLLECTS MORE DUST AND DIRT.

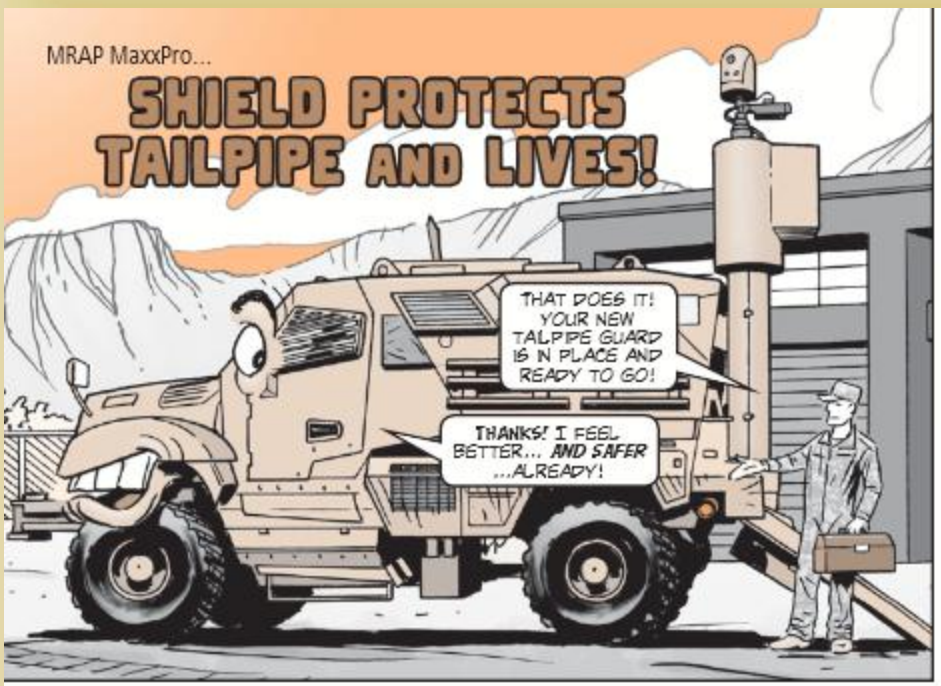
IF THE WIRE ROPE **ISN'T** USED A LOT, OR IF CONDITIONS ARE DAMP OR SALTY, GIVE ***EXTRA PROTECTION*** WITH A COAT OF MIL-G-18458 WIRE ROPE GREASE. A 35-LB CAN COMES WITH NSN 9150-00-530-6814.

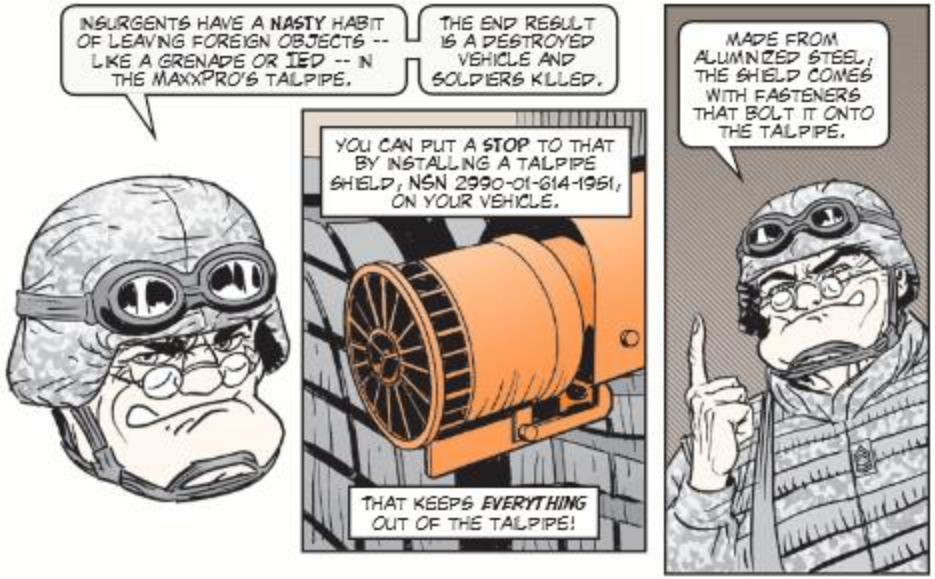
I'LL CLEAN OFF THE DIRT...

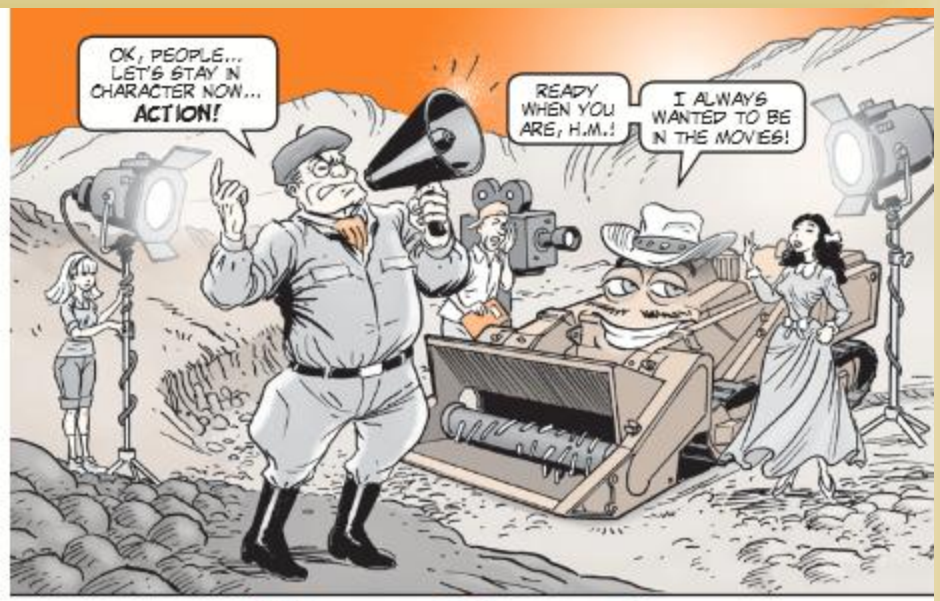
...AND I'LL LUBE WITH SOME FRESH OIL!

MRAP MaxxPro...

SHIELD PROTECTS TAILPIPE AND LIVES!





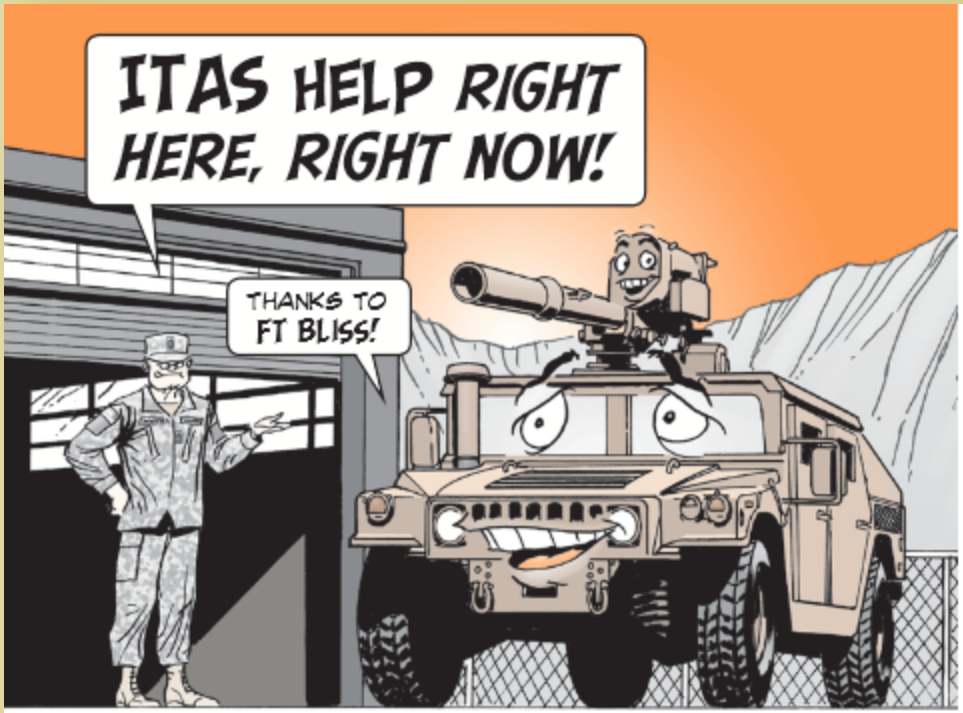


Now Showing: M160 Light Flail Video

A new video is available on the M160 Light Flail Remote Control Anti-Personnel Mine Clearance System. The 58-minute video is at the UTAP website:
https://utap.army.mil

1. Click on the VIDEOS tab.
2. In the Search for Item box, type M160.
3. Select the Army button under Select Branch and click GO.
4. Under Item Name, click on M160 Flail Remote Control Anti-Personnel Mine Clearing System.
5. Under the Video column, click on M160 Flail CB_Operators Video_(ARMY).wmv.
6. Click Open to view the video or Save to save a copy to your hard drive.

Questions? Contact TACOM LCMC's UTAP customer service helpdesk at DSN 786-4276, (586) 282-4276 or by email:
usarmy.detroit.tacom.mbx.ilsc-utap@mail.mil



Dear Editor,

Through hard experience, we've found this advice will make life so much easier for improved target acquisition system (ITAS) units:

Develop a battery charging program.

The ITAS is powered by the lithium-ion power source, which consists of the lithium battery box (LBB) and two chargers: the lithium AC charger (LIAC) for dismounted charging and the vehicle-mounted charger.

If the LBB is properly maintained, it can power ITAS for at least 14.5 hours. But if it's not charged as a regular part of operations and during monthly PMCS as spelled out in TM 9-1425-923-10, it can become more and more difficult to fully charge or even become inoperable. That's why it's critical crews follow the charging directions in the -10 and keep all LBBs charged.

If you're storing LBBs for longer than 30 days, develop a charging plan to ensure each battery is fully re-charged at least every 90 days. (If a battery hasn't been charged for more than 30 days, it may take longer to fully charge it.)

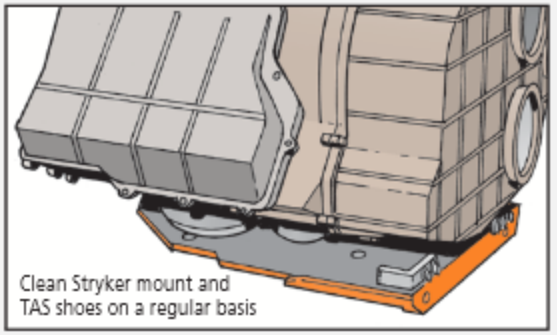
Remember once the BAT, ELEC fault light comes on, it's too late. The battery can't be charged. You must get it replaced and that's expensive. All LBBs must be shipped to depot for repair.

Store LBBs in as cool a place as possible.

Heat can reduce cell life. But if you keep the LBB charged, it will provide needed power at all temperatures.

Remove target acquisition subsystem (TAS) monthly and clean the Stryker mount.

If the TAS is left mounted for long periods, corrosion can form on the mount's rails and make it extremely difficult to remove the TAS without damaging the TAS or mount. That won't be a problem if you monthly remove the TAS and clean the mount rails and the TAS shoes.



Clean Stryker mount and TAS shoes on a regular basis

Keep motion gyro switch in GYRO when operating the modified improved target acquisition system (MITAS).

If the switch is left in BASIC, the gunner's ability to scan, detect and track targets smoothly will be decreased. If there is a drift in the system in AZ or EL without any gunner input, the gyro and motor drive need to be "nulled" (or synched). Hold the gyro switch up until the motion gyro illuminator blinks, which means the gyro and motor drive are nulled. Then verify without gunner input that there is no drift in the system.

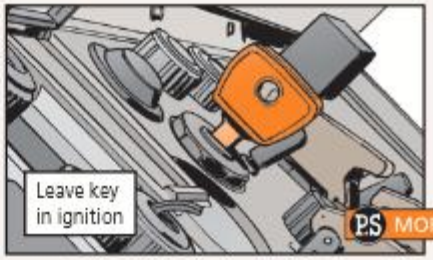
CW3 Joseph Peoples
B Co, 501st BSB
Ft Bliss, TX

Editor's note: *The ITASes will be much better off if units follow your directions, Chief. Thanks.*

Dear Editor,

We help keep the Foxes on the road here at Ft Stewart. Through our work, we've noticed a few mistakes that Soldiers make that can stop a Fox in its tracks. But just a bit of attention can keep the Fox happily sniffing out trouble:

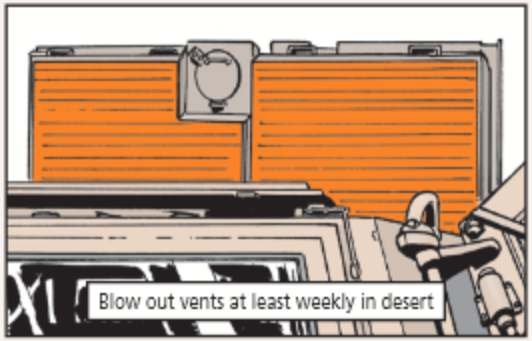
Leave the key in. All Foxes use the same key. Foxes are secured not by removing the key, but by padlocking the doors. When the key is removed it is often lost. Then Soldiers improvise by turning the ignition switch with a screwdriver or pocket knife. Soon the ignition switch is broken. Avoid that problem by leaving the key in the ignition all the time.



PS MORE

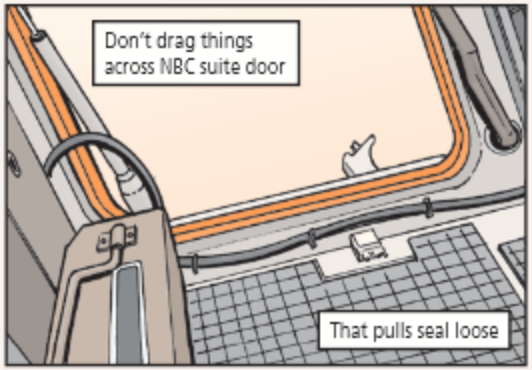
Let the warning lights warn you. If the dashboard warning lights kick on or you go above a certain speed, the Fox's anti-gas system activates and makes it difficult to press down on the gas pedal. Soldiers disable the system by turning off its circuit breaker. But then you won't be alerted to major problems like low oil pressure or the transmission overheating. A little extra speed is not worth that danger. Leave the circuit breaker alone.

Clean means cool. Fine sand clogs the grill door vents on top of the Fox. The lack of air to the A/C condenser causes the A/C to overheat. At least weekly in the desert, Fox crews need to blow out the vents from the inside out so that the A/C gets plenty of air. This helps the A/C work more efficiently, too, which means you stay cooler.



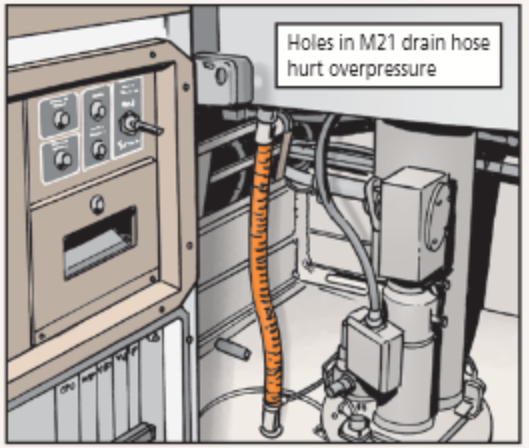
Keep overpressure pressured. The usual causes of poor overpressure are plugged valves and poor seals. Dirt and trash like leaves can keep the two valves from sealing tight. Air escapes and you can't build up air pressure. Open both valves weekly and clean out any debris. Make sure their seals are in good shape, too.

Be careful carrying stuff through the NBC suite door. If you drag things across the door's seal, the seal is pulled loose. Once again, the Fox can't build up air pressure.

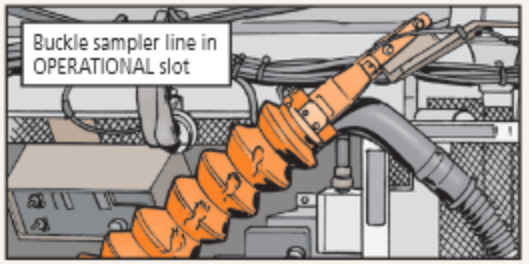


When you do your weekly PMCS, check the door and hatch seals for loose spots or tears. That way you can get them fixed before your next mission.

One other item that can cause overpressure problems is the drain hose that runs from the M21 container box to the floor plate. The hose is often accidentally kicked or bumped when Soldiers are working in the confined space of the NBC suite. If the hose is punctured, the overpressure system won't work. Watch your feet around the hose and remember to check the hose if the Fox can't build pressure.



Buckle up for sampling. When you're using the double wheel sampler, make sure you have the sampler line securely buckled in the OPERATIONAL slot. If the sampler isn't secure, it could come off completely during travel. And it won't work in AUTOMATIC mode when it's not securely buckled in.



Carefully follow the procedure for starting and stopping the MM1 spectrometer. If you skip steps, the MM1 will fault out. That can damage circuit cards.

Randy Pearce
Ft Stewart, GA

Editor's note: *Thanks, Randy. Your suggestions will keep Foxes on the trail instead of in the shop.*